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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,298	03/18/2004	Ulrich Kleine	034691/273971	5716

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EXAMINER

HE, AMY

ART UNIT PAPER NUMBER

2858

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,298

Applicant(s)

KLEINE ET AL.

Examiner

Amy He

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/18/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 1-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figures 5, 7 and 9 are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the measuring coil, the signal source and the connection between each claimed components must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because informality phrases "comprising" and "means" are used. Corrections are required. See MPEP § 608.01(b).

Claim Objections

4. Claims 1-3, 5-6, 8, 11, 20 and 23 are objected to because it is not clear how does the phrase "and/or" specifically limit the claims. Appropriate corrections are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-3 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (the known circuit as shown in Figure 1), in view of Schneider (U. S. Patent No. 6, 073,043).

Referring to claim 1, applicant's admitted prior art (the known circuit as shown in Figure 1) discloses a circuit for measuring distances, comprising:

at least two inputs (1 and 2);

at least one measuring coil (3); and

at least one signal source (signal source, specification page 10, line 4) for generating at least two input signals (E_{pos} and E_{neg}), wherein the at least two inputs are activatable by means of the input signals;

wherein the input signals (E_{pos} and E_{neg}) are applied to the inputs (1 and 2) of the measuring coil (3); and

wherein the input signals (E_{pos} and E_{neg}) are applied to a circuit (amplifier circuit as shown in Figure 1; specification page 1, lines 19-33) used for generating a measuring signal and/or an output signal that is dependent on a temperature influence.

Still referring to claim 1, applicant's admitted prior art does not disclose that the input signals are applied to a switched capacitor network for generating the measuring signal/output signal. Schneider discloses signal processing using switched capacitor (col. 23, lines 57-60; col. 25, lines 40-42).

A person of ordinary skill in the art would find it obvious at the time of the invention to modify the known circuit of applicant's admitted prior art to use a switched

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capacitor network, as taught by Schneider, for further processing the measuring signal/output signal dependent on a temperature influence.

Referring to claim 2, applicant's admitted prior art (the known circuit as shown in Figure 1) discloses that the two input signals are in phase opposition (specification page 1, line 25).

Referring to claim 3, applicant's admitted prior art (the known circuit as shown in Figure 1) discloses that the input signals are filtered proportionately by means of at least one filter (C1).

Referring to claim 23, it is the method claim corresponding to the rejected apparatus claim (claim 1). It is rejected for the same reason as stated above for the rejection of the apparatus claim.

6. Claims 4-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (the known circuit as shown in Figure 1) in view of Schneider (U. S. Patent No. 6, 073,043), and further in view of Ribner. (U. S. Patent No. 5, 148, 166).

Referring to claims 4-22, applicant's admitted prior art in view of Schneider discloses a SC network as in claim 1. Applicant's admitted prior art in view of Schneider does not specifically disclose that the SC network includes: at least one SC amplifier; or a first and second positively delayed SC amplifiers; or at least one SC integrator; or a negative undelayed SC integrator; or the combination of a first and second SC amplifier with an SC integrator having an output applied to a second input of the first SC

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amplifier; or the outputs of the first and second SC amplifiers are added by an SC adder; or the output of the second SC amplifier is applied to a second input of a SC adder; or the first and second SC amplifier and the SC adder are all configured as negative undelayed circuits; or one SC integrator is configured as a positive delay circuit; or one SC adder produces an inverted output signal; or the combination of one SC amplifier, one SC integrator and one SC difference amplifier, with at least one of the input signals multiplied by a factor and stored in the SC integrator, the factor is erased by a capacitance of the SC integrator during each clock period; or one SC difference amplifier for subtracting the outputs of the SC amplifier and the SC integrator; or the output of the SC amplifier is applied to a second input of one SC integrator; or the SC network for generating an output signal which has a delay of one clock period.

However, signal processing using the claimed SC network is not new in the art as evidenced in Ribner (See the switched capacitor network as shown in Figures 6-7 including SC amplifier, SC integrators, adder, subtractor and delay circuit).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to further modify the known circuit of applicant's admitted prior art to use a SC network as claimed in claims 4-22, in order to further process the signal output of the known circuit, for the purpose of having reduced sensitivity to component mismatching, finite amplifier gain or other nonideal circuit attributes (col. 3, lines 13-21). And since it has been held to be within the general skill of a worker in the art to select a known tool for a known purpose on the basis of its suitability for the intended use as a matter of obvious design choice *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mednikov et al. (U. S. Patent No. 6, 462,536) discloses a circuit for measuring distances, comprising two inputs; at least one measuring coil, and a signal source for generating input signals.

McCleary et al. (U. S. Patent No. 5, 729, 163) discloses inductive position sensors and switched capacitor network.


Lien (U. S. Patent No. 6, 639, 414) discloses a switched capacitor circuit for measuring changes in capacitor gap.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AH
July 14, 2005.


ANJAN DEB
PRIMARY EXAMINER